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1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
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D4146-1

Job Sheet 194346



Part No: D4146-1

Job Qty: 20 pcs

Part Name: Fitting



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 4/30/19

Job Tracking No:

Due Date: 5/14/19

Created By: Marie Lajeunesse

Type: ~~Stock~~ *Sold*

Description:

Note: DWG REV A IPP REV:A NEW ISSUE 10-10-05 JLM VERIFIED BY:DD

Ship Via:

## Bill of Materials

## Job Routing

| Op No | Operation                   | Qty    | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off                   |
|-------|-----------------------------|--------|------------|----------|-----------|---------|-----------------------|-----------|----------------------------|
|       |                             |        |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |                            |
| 100   | Doosan - 1                  | 20 pcs | 5/14/19    | 5/14/19  | 0.00      | 8.00    | Doosan - 1            |           | <i>[Signature]</i>         |
| 120   | QC 8                        | 20 pcs | 5/14/19    | 5/14/19  | 0.00      | 0.00    | QC 8 - 12             |           | <i>mk19/05/25</i>          |
|       |                             |        |            |          |           |         | QC 8 - 14             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 17             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 20             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 25             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 3              |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 32             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 33             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 35             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 39             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 4              |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 44             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 45             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 49             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 58             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 8              |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 9              |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 68             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 67             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 1 (A)          |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 47             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 40             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 52             |           |                            |
|       |                             |        |            |          |           |         | QC 8 - 23             |           |                            |
| 130   | Packaging 3-1 - Stock - B4B | 20 pcs | 5/14/19    | 5/14/19  | 0.00      | 0.00    | Packaging 3 - 1 - B4B |           | <i>ST07988</i> MAY 27 2019 |
|       |                             |        |            |          |           |         | Packaging 3 - 2 - B4B |           |                            |
|       |                             |        |            |          |           |         | Packaging 3 - 3 - B4B |           |                            |
|       |                             |        |            |          |           |         | Packaging 3 - 4 - B4B |           |                            |
|       |                             |        |            |          |           |         | Packaging 3 - 5 - B4B |           |                            |
|       |                             |        |            |          |           |         | Packaging 3 - 6 - B4B |           |                            |

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|                                                                                                                                                                                                                                                            |                       |                      |                  |                        |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|------------------|------------------------|-----------------|
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 7 - B4B  |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 8 - B4B  |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 9 - B4B  |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 10 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 11 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 12 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 13 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 14 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 15 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 16 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 17 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 18 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 19 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 20 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 21 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 22 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 23 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 24 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 25 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 26 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 27 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 28 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 29 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 30 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 31 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 32 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 33 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 34 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 35 - B4B |                 |
|                                                                                                                                                                                                                                                            |                       |                      |                  | Packaging 3 - 36 - B4B |                 |
| 140                                                                                                                                                                                                                                                        | QC 21 - SA            | 20 pcs               | 5/14/19          | 0.00 0.00              | QC 21 - SA - 21 |
|                                                                                                                                                                                                                                                            |                       |                      |                  |                        | QC 21 - SA - 70 |
|                                                                                                                                                                                                                                                            |                       |                      |                  |                        | QC 21 - SA - 53 |
| <p>Part Op <b>100</b> - (Doosan Lathe)<br/>         Descriptions: <b>120</b> - (QC8- Inspect parts - second check)<br/> <b>130</b> - (Identify as per dwg &amp; Stock Location: _____)<br/> <b>140</b> - (QC21- Final Inspection - Work Order Release)</p> |                       |                      |                  |                        |                 |
| <b>Job BOM</b>                                                                                                                                                                                                                                             |                       |                      |                  |                        |                 |
| <b>Part / Item</b>                                                                                                                                                                                                                                         | <b>Component Name</b> | <b>Quantity</b>      | <b>Operation</b> | <b>Container</b>       |                 |
| M303R1.000                                                                                                                                                                                                                                                 | 303 Round Bar 1.00    | 3.3320 ft (.1666 ea) | 100-Doosan - 1   | 515662                 |                 |
| <b>Job Allocations</b>                                                                                                                                                                                                                                     |                       |                      |                  |                        |                 |
| <b>Operation</b>                                                                                                                                                                                                                                           | <b>Component Part</b> | <b>Required</b>      | <b>Inventory</b> | <b>Allocated</b>       |                 |
| 100-Doosan - 1                                                                                                                                                                                                                                             | M303R1.000            | 3                    | 17               | 0                      |                 |

DAC  
21  
9-59 MAY 27 2019

| Part Specifications |             |                                |                |          |                  |
|---------------------|-------------|--------------------------------|----------------|----------|------------------|
| Spec No             | Description | Target/Tolerance               | Limits         | Type     | Special Comments |
| 1                   | Fitting     | 0.290Inches + 0.006<br>- 0.001 | 0.296<br>0.289 | Diameter |                  |
| 2                   | Fitting     | 0.810Inches ± 0.010            | 0.820<br>0.800 |          |                  |
| 3                   | Fitting     | 0.550Inches ± 0.010            | 0.560<br>0.540 | Diameter |                  |
| 4                   | Fitting     | 0.470Inches ± 0.010            | 0.480<br>0.460 | Diameter |                  |
| 5                   | Fitting     | 0.330Inches ± 0.010            | 0.340<br>0.320 | Diameter |                  |
| 6                   | Fitting     | 0.063Inches ± 0.010            | 0.073<br>0.053 |          |                  |
| 7                   | Fitting     | 1.790Inches ± 0.030            | 1.820<br>1.760 |          |                  |
| 8                   | Fitting     | 1.700Inches ± 0.030            | 1.730<br>1.670 |          |                  |
| 9                   | Fitting     | 1.590Inches ± 0.030            | 1.620<br>1.560 |          |                  |
| 10                  | Fitting     | 1.190Inches ± 0.030            | 1.220<br>1.160 |          |                  |
| 11                  | Fitting     | 0.840Inches ± 0.030            | 0.870<br>0.810 |          |                  |
| 12                  | Fitting     | 0.810Inches ± 0.030            | 0.840<br>0.780 |          |                  |
| 13                  | Fitting     | 0.500Inches ± 0.030            | 0.530<br>0.470 |          |                  |
| 14                  | Fitting     | 0.539Inches ± 0.010            | 0.549<br>0.529 | Diameter |                  |

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Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                               |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                               |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Sequence #: _____                                                                                                                 | QTY Affected : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | MRB (QSI042)                  |  |
| <b>Description Work Order Deviation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                   | <b>Disposition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | <b>Completed By</b>           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>Lead hand / Supervisor</b> |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                               |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>QC / QA Coordinator</b>    |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                               |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                               |  |